

REMARKS

In light of the above amendments and following remarks, reconsideration and allowance of this application are respectfully requested.

Claims 1-10, 15-24, 26-29, 42-44, 56, 57, 67-76, 81-95, 108-110, 122, and 123 are in this application with the remaining claims having been previously withdrawn. Claims 1, 26, 27, 42, 43, 56, 67, 75, 78, 92, 93, 108, and 122 are herein amended.

The office action rejects claims 1-10, 15-24, 26-29, and 42-44 under 35 U.S.C. § 102(b) as anticipated by WO 00/41764 to Minogue (“the ‘764 application”). Further, the office action rejects claims 67-76, 81, 90, 92-95, and 108-110 are rejected anticipated by the ‘764 application under 35 U.S.C. § 102(b) or in the alternative as unpatentable over the ‘764 application under 35 U.S.C. § 103(a). Finally, claims 25, 56, 57, 91, 122, and 123 are rejected as unpatentable over the ‘764 application. It is respectfully submitted that the claims, as amended, patentably distinguish over the relied upon reference for at least the following reason.

Independent claim 1 recites:

wherein the predetermined parameters of the electrical pulse signal are selected so as to induce a shivering phenomenon therein, which increases the subjects caloric consumption to at least about three times its resting metabolic rate;

a monitor for monitoring the cardiovascular response of the subject; and

a feedback mechanism for controlling said signal generator based upon the cardio vascular response.

(emphasis added)

It is respectfully submitted that the ‘764 application does not teach or suggest an apparatus for stimulating the muscles of a subject such that the contractions induce a shivering phenomenon. The Examiner has alleged that the ‘764 apparatus could be optimized for such a

use, however, as described by the attached declaration, not only does the '764 apparatus fail to disclose such capabilities, it is not capable of such use.

Further, as amended claim 1 teaches that the shivering "increases the subject's calorie consumption to at least about three times its resting metabolic rate." Again as shown in the attached declaration, the device described in the '764 application is not capable of increasing a subjects calorie consumption to at least about three times its resting metabolic rate. The device of the '764 application is directed solely to contracting the relatively small muscles of the abdomen. Because of their size, as compared to the mass of a subject, their contractions, cannot be maximized to result in caloric consumption of three times the resting metabolic rate. Because of the minimal muscle mass actuated by the device of the '764 application, and because such a small muscle mass has relatively small oxygen consumptions requirements, even when stimulated, they cannot increase a subjects calorie consumption to at least about three times its resting metabolic rate. In contrast, as shown in Figs. 4a, 4b, 5a, and 5b, an increase of at least about 3 times the calorie consumption over the subjects resting metabolic rate can be clearly seen.

Still further, claim 1 has been amended to recite:

a monitor for monitoring the cardiovascular response of the subject; and
 a feedback mechanism for controlling said signal generator based upon the cardio vascular response

As acknowledged by the Examiner, there is no teaching of a monitor in conjunction with the device described in the '764 application. The Examiner asserts that such a feature would be obvious to combine with the device of the '764 application, however, it is submitted that the Examiner has failed to provide any motivation for such combination. Though monitoring and feedback devices are used in conjunction with certain training devices, there is no suggestion to

incorporate them into the device of the '764 application, which is limited to contraction of a small group of muscles in the abdomen. This small group of muscles, as described in the attached declaration cannot not effect a sufficient cardiovascular response and therefore does not need monitoring as suggested by the Examiner. Accordingly, contrary to the Examiner's assertion, there is no suggestion in the '764 application to combine such a device with a monitor or with a feed back device. Similarly, the Examiner has not provided a motivation to combine a monitor with the apparatus of the '764 application from the "art" of stimulation systems relied upon. Simply put there would be no motivation to couple such a device to monitors and feedback mechanisms as recited in claim 1.

Finally, with respect to the Examiner's *Response to Arguments* the Examiner has reiterated his interpretation of a portion of the specification. It is submitted that this interpretation is incorrect. It is respectfully submitted that the portion of the specification cited by the Examiner at the top of page 3 does not mean that all muscle movements are to be interpreted as evidencing a shivering phenomenon in accordance with the instant application. Indeed, it is again submitted that the Examiner's interpretation takes the Applicant's statement out of the context from which it must be considered. The statement relied upon by the Examiner begins with "This shivering," while grammatically incorrect, it is apparent that this portion of the statement refers back to a preceding definition of "shivering" provided in the specification. Upon inspection it can be found that in fact the immediately preceding paragraph describes that a shivering phenomenon is considered within the scope of the application even if there are "intermediate periods of rest or lesser shivering activity." Thus it is clear that the portion of the specification cited by the Examiner is merely a refinement of this statement to clarify the frequencies of shivering and the intensities of shivering considered within the scope of the

invention. This is further supported by the following portion of the statement relied upon by the Examiner where it states that “all such muscle movement,” again the word “such” though arguably grammatically incorrect, nonetheless clearly indicates to the reader that the muscle movements have already been defined. Again by looking at the preceding paragraph, it can be seen that shivering is defined in terms of “muscle movements” and particularly those that are “repeated over a predetermined time period for the purpose of expending calories.” Thus the word “such” in the portion of the specification relied upon by the examiner is again referring back to the preceding paragraph the “muscle movement...for the purpose of expending calories.” Therefore, it is submitted that the Examiner has taken an overbroad interpretation of the muscle movements that can be considered “shivering” according to the instant application. As such, there is no teaching or suggestion of shivering in the ‘764 application, and therefore claim 1 is patentably distinguished therefrom.

Accordingly, for at least the forgoing reasons, it is submitted that independent claim 1 patentably distinguishes over the relied upon portions of the ‘764 application and is allowable. Independent claims 27, 42, 56, 67, 93, 108, and 122 recite similar features and are therefore also allowable. The other claims are each dependent from one of the independent claims discussed above and are therefore believed patentable for at least the above-identified reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In the event that the Examiner disagrees with any of the foregoing comments concerning the disclosures in the cited prior art, it is requested that the Examiner indicate where in the reference, there is the basis for a contrary view.

CONCLUSION

In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable over the prior art, and early and favorable consideration thereof is solicited.

The Commissioner is authorized to charge any additional fee that may be required to Deposit Account No. 50-0320.

Respectfully submitted,
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